SECTION

I

AMA Overview

Preface

Arizona's desert environment and limited groundwater supplies directly affect the quality of life and its economy. All economic activity, including mining, irrigated agriculture, and growth of cities occurs only where dependable water supplies are available. As a result, Arizona places a high priority on managing its limited water to ensure that secure water supplies are available now and well into the future.

Groundwater sources account for about forty percent of the state's water use. Groundwater is found beneath the earth's surface in natural reservoirs called aquifers. In most cases, the water stored in these reservoirs has been in place for millions of years. Throughout this century, groundwater has been pumped out more rapidly than it is being replenished, creating a condition called overdraft. Groundwater overdraft creates significant problems, such as increased well drilling and pumping costs. Generally, water quality can also suffer because groundwater pumped from greater depths may contain more salts and minerals. In areas of severe groundwater depletion, the earth's surface may also subside, causing cracks or fissures that can damage roads or building foundations and other underground structures. Though a large amount of water remains stored in Arizona's aquifers, its availability is limited by location, depth, and quality. Continuing to overdraft the state's groundwater supplies could seriously jeopardize the ability to ensure a secure water supply for the future. In recognition of this condition, Arizona implemented the Groundwater Code of 1980 (Code). The Code promotes water conservation and long-range planning of the State's water resources and established the Arizona Department of Water Resources (Department) to administer the Code's provisions.

The Code requires the Department to promulgate a management plan for the third management period, 2000 to 2010, for each active management area (AMA). Arizona's five AMAs include eighty percent of the State's population and seventy percent of the State's groundwater overdraft. Therefore, the Department considers it's responsibility to develop "a management plan with a continuing mandatory conservation program for all persons withdrawing, distributing, or receiving groundwater designed to achieve reductions in withdrawals of groundwater" to be an essential aspect of ensuring the availability of Arizona's long-term water supplies. In order to develop the regulatory programs, the Department has conducted a comprehensive evaluation of Arizona's physical water resources, historic water uses, and associated water use trends. In addition, the Department believes that comments from the general public and from groundwater users are fundamental to the development of its regulatory programs. As a result, to achieve reductions in withdrawals of groundwater and to conserve Arizona's vital groundwater resources while at the same time recognizing the importance of a robust economy and the need for technically and practicably feasible regulations, the Department has considered extensive public comments on its proposed management plans prior to final adoption of each plan.

The Department takes pride in the opportunity to provide a vision of water management for Arizona that embodies the collective needs and diverse perspectives of all Arizonans and that meets the challenges of ensuring the health of its water systems and the availability of long-term water supplies in an arid region with a growing economy and population. In the Third Management Plan, the Department explains it's water management approach and the basis for its regulatory programs, the details of its regulatory programs including specific conservation requirements for groundwater users, and the Department's vision for future water management as well as the assumptions upon which its vision is based.

Section I of the Third Management Plan provides an overview of the Department's water management approach; a description of the physiographic, hydrologic, and water resources of the Pinal AMA; and a detailed description of water use characteristics of the various water use sectors within the AMA. The physical water resources data presented in Chapter 2 and the historic water use and associated water use trends described in Chapter 3 provided the Department with important information from which it

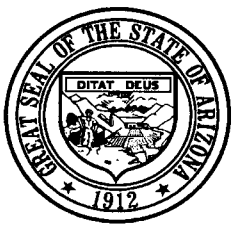
developed a baseline water budget. Information presented in this section was also used in developing water management programs which that are presented in Section II and the projections of future water use in Section III.

In Section I, the Department intends to provide the reader with a better understanding of the management approach, the water resources, and the water use characteristics of the Pinal AMA. Such an overview is necessary to better appreciate the reasoning, perspective, and methods being taken by the Department as it continues to develop a long-term water management strategy, with particular emphasis on the third management period (2000 to 2010).

CHAPTER

1

Water Management Approach



1.1 INTRODUCTION

This chapter describes the goals, objectives, and contents of the Third Management Plan for the Pinal Active Management Area (AMA), within the context of the Arizona Department of Water Resources (Department) and the Groundwater Code (Code). The following topics are discussed in the order listed:

- The Arizona Department of Water Resources (section 1.2)
- The Groundwater Code (section 1.3)
- Governmental and Institutional Setting (section 1.4)
- Development of the Third Management Plan (section 1.5)
- Conclusion (section 1.6)

1.2 THE ARIZONA DEPARTMENT OF WATER RESOURCES

The Department was created by the 1980 Groundwater Code to manage the water resources of Arizona. The Department administers state laws, explores methods of augmenting water supplies to meet future demands, and works to develop public policies that promote efficient use and equitable allocation of available water supplies. To secure long-term water supplies for Arizona, the Department oversees the use of surface water and groundwater in the state and represents the state's interests in interstate and federal issues. The mission of the Department is:

> *To ensure a long-term, sufficient, and secure water supply for the state; to develop public policy which promotes efficient use and equitable distribution of water in an environmentally and economically sound manner; and to promote the management of floodplains and dams to reduce loss of life and damage to property.*

1.3 THE GROUNDWATER CODE

In 1980, Arizona made a commitment to the long-term management and conservation of its limited groundwater supplies through the passage of the Code, which is the cornerstone of Arizona's water management efforts. The Code's goals are to eliminate severe groundwater overdraft in the state's most populous areas where groundwater supplies have been rapidly diminishing and to provide the means for allocating Arizona's limited groundwater resources to most effectively meet the state's changing water needs.

The Code limits withdrawals of groundwater within AMAs to holders of groundwater rights, service area rights, and groundwater withdrawal permits, and to small domestic users. Under the Code, those water uses existing in 1980 were allowed to continue within the limits established under a new water rights system, and new uses were required to fit within the management plans and goals of the AMAs. Those individuals who are not familiar with the different types of groundwater rights established by the Code are encouraged to read the Glossary of Terms attached as a supplement to the management plan. The Code also contains provisions to replace groundwater use through conservation and use of renewable water supplies. The full text of the Code can be found on the following Web site: www.azleg.state.az.us

1.3.1 The Groundwater Problem

Groundwater overdraft in Arizona has resulted in the lowering of groundwater levels by as much as 600 feet in some areas. Groundwater depletion has made it economically infeasible to pump water in some cases, has caused the lowering and cracking of the land surface (subsidence), and has resulted in groundwater quality problems due to the migration of contaminated water. Continued overdraft of groundwater supplies will exacerbate these problems. Since 1948 when groundwater pumping by agriculture intensified in the Pinal AMA, over 43 million acre-feet of groundwater has been pumped from

the AMA's aquifers. Groundwater overdraft has lowered water levels by greater than 500 feet in the farming areas surrounding the community of Stanfield and in excess of 300 feet in the farming areas near the City of Eloy. Subsidence has occurred in several areas of the AMA and is projected to increase if water level declines continue.

1.3.2 Provisions of the Groundwater Code

The Code contains a number of provisions designed to address the problem of groundwater withdrawals in the state. These include the designation of AMAs, limitations on groundwater withdrawals, enactment of management goals, preparation of management plans, instituting assured water supply provisions, and other programs. These provisions are described below.

1.3.2.1 Creation of AMAs and Irrigation Non-Expansion Areas

The geographical areas in the state where intensive groundwater management is a priority are designated as AMAs. Upon enactment of the Code, four AMAs were established where overdraft was most severe: Phoenix, Pinal, Prescott, and Tucson. In 1994, the Santa Cruz AMA was created from the southern portion of the Tucson AMA. The Code also established two Irrigation Non-Expansion Areas (INAs): Douglas and Joseph City. A third INA, Harquahala, was designated by the director in June, 1982. Figure 1-1 shows the location of the five AMAs and the three INAs. Figure 1-2 shows the location of the Pinal AMA and its five groundwater subbasins: Eloy, Maricopa-Stanfield, Vekol Valley, Santa Rosa Valley, and Aguirre Valley.

1.3.2.2 The Pinal AMA Management Goal

For three of the AMAs, Phoenix, Prescott, and Tucson, the management goal is to achieve safe-yield by 2025 or earlier, and the goal for the Santa Cruz AMA is to maintain safe-yield and prevent long-term declines in local water levels. In the Pinal AMA where a predominately agricultural economy exists, the goal is to allow the development of non-irrigation water uses, extend the life of the agricultural economy as long as feasible, and preserve water supplies for future non-irrigation uses. The goal for the Pinal AMA is often referred to as "planned depletion." The Code does not specify the quantity of water that must be preserved for non-irrigation uses, nor does it list any criteria by which to determine how long agricultural economies should be preserved.

For the second management period (1990-2000), the Department, at the request of the Pinal AMA Groundwater Users Advisory Council (GUAC), interpreted the AMA's management goal to be the preservation of groundwater supplies between 1,000 and 1,200 feet below land surface for future non-irrigation uses. In the third management period, the Department will begin to manage the rate of groundwater overdraft to 1,000 feet below land surface by means of a "planned depletion allowance" (PDA). This approach is discussed in detail in the preface to Section II. The implementation of the PDA and associated impacts are discussed in chapters 8, 11, and 12.

1.3.2.3 Management Plans

To achieve the management goal for each AMA, water conservation and management requirements are established in each of five management periods. The five management periods are as follows:

First management period:	1980-1990
Second management period:	1990-2000
Third management period:	2000-2010
Fourth management period:	2010-2020
Fifth management period:	2020-2025

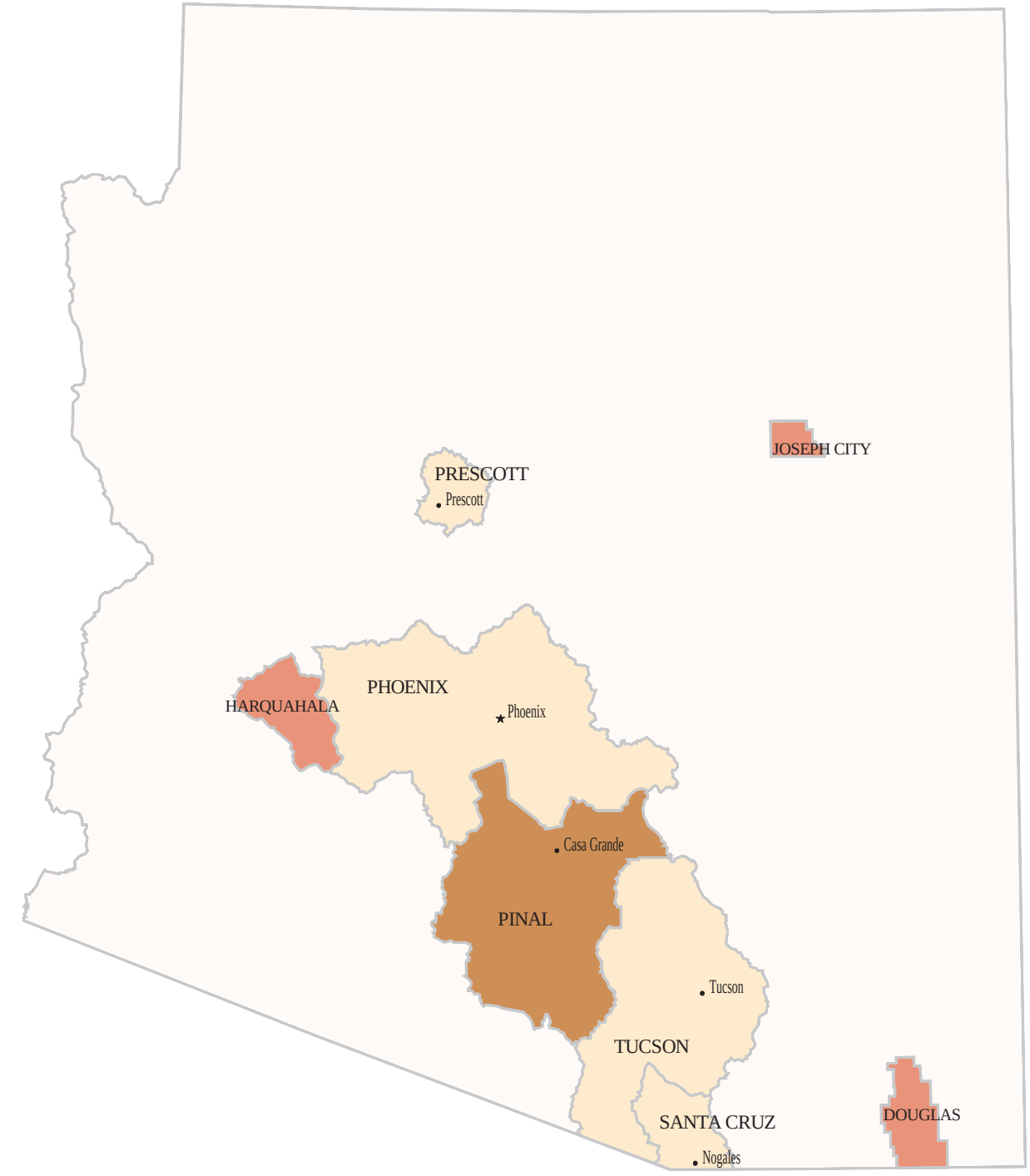
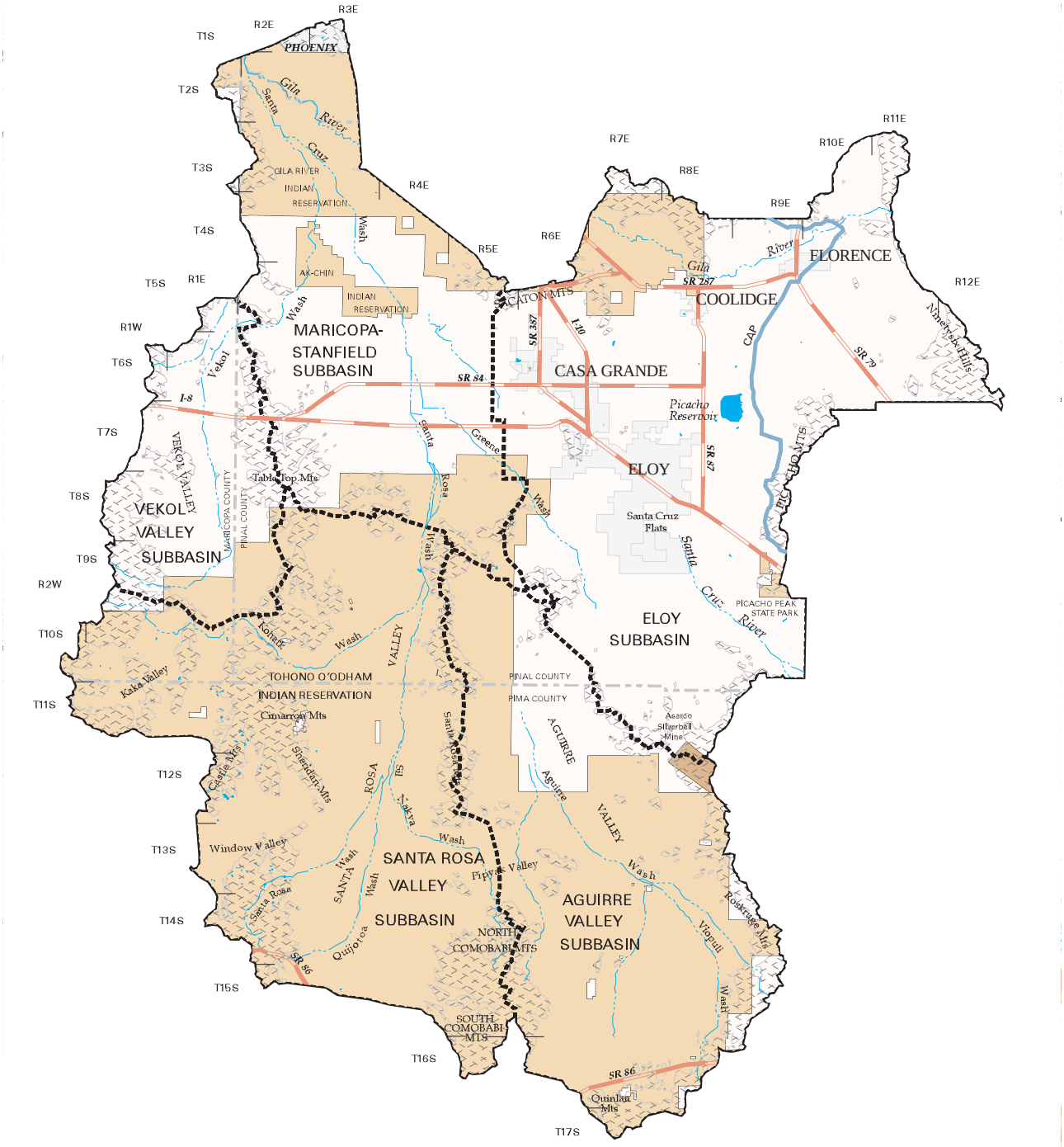


Figure 1- 1

Active Management Areas
and Irrigation Non-Expansion Areas

ORIGINAL SOURCE
Arizona Department of Water Resources
Geographic Information System



Pinal AMA
Incorporated Areas
Indian and Military Reservatons
Mines
Lakes
Hardrock
Subbasins
Rivers and Streams
CAP Canal
Highways and Roads
County Boundaries

Figure 1 - 2

Pinal Active Management Area

0 3 6 9 12
Miles
North

ORIGINAL SOURCE
Arizona Department of Water Resources
Geographic Information System

Requirements for each management period are described in separate management plans prepared for each AMA. Management plans include water conservation requirements for agricultural, municipal, and industrial groundwater users; a water quality assessment and management program; an augmentation and recharge program; and a conservation assistance program. In each successive management period, the preparation of a plan provides the Department and AMA water users with the opportunity to analyze the effectiveness of water management efforts and address water management issues in the AMA. Adjustments in water management strategies and conservation requirements are made in each successive plan to ensure achievement of the management goal.

The First Management Plan was the first step toward a comprehensive and effective management program. The plan initiated conservation programs and focused attention on important water management issues. The Second Management Plan expanded on the conservation programs of the First Management Plan, and initiated the integration of supply augmentation into the AMA management strategy. The Second Management Plan placed a strong focus on the implementation of conservation measures and practices to achieve cost-effective levels of efficient water use.

Even after the implementation of two management plans, groundwater remains a significant source of supply for municipal, agricultural, and industrial uses in all five AMAs. Although groundwater overdraft in the Pinal AMA decreased from about 596,000 acre-feet in 1985 to approximately 125,000 acre-feet in 1995, largely as a result of Central Arizona Project (CAP) water being utilized as a replacement supply for groundwater, overdraft still remains a problem. While CAP utilization has generally been consistent with Second Management Plan projections, total water demand has been significantly less than projected mostly due to agricultural demand being overestimated. The observed agricultural demand between 1985 and 1994 decreased from previous years as a result of a major downturn in the agricultural economy during that period.

The third management period constitutes the midpoint in Arizona's effort to achieve the AMA management goals. After the end of the third management period in 2010, there will only be 15 years left to achieve the AMA goals by 2025. It is, therefore, vital that the Third Management Plan establish a water management strategy that encompasses the use of water conservation, supply augmentation, and groundwater quality management by the agricultural, municipal, and industrial sectors to achieve the AMA goals by 2025. In addition, all water users need to continue their commitment to using available water supplies efficiently and to making additional use of renewable water supplies to replace existing groundwater use and meet growing demands.

Water conservation requirements established for the Second Management Plan provide the basic structure of the conservation requirements to be applied during the third management period. Changes in the Third Management Plan address additional water management issues and local concerns. The Third Management Plan describes the developing role the Department must play in meeting water management objectives and addresses the resources and commitment needed from both the Department and water users to achieve AMA management goals.

1.3.2.4 Assured Water Supply Program

The Code prohibits the sale or lease of subdivided land in an AMA without the demonstration of an assured water supply. Although the Assured Water Supply Program (AWS Program) was instituted in 1980, it was substantially strengthened in 1995 with adoption of the Assured Water Supply Rules (AWS Rules). Under the AWS Rules, new development within an AMA must demonstrate that sufficient water supplies of adequate quantity and quality are available to meet proposed uses for 100 years. Only after demonstration of sufficient water supply can a development be approved for sale to the public.

The AWS Rules apply to developers seeking a Certificate of Assured Water Supply (Certificate of AWS) for an individual subdivision and to municipal providers seeking a Designation of Assured Water Supply (Designation of AWS) for a service area. A Designation of AWS results from a demonstration that there are adequate water supplies available to the provider to meet current and future demands of the customers currently on its system, and the demands of customers it has committed to serve, for 100 years. The water supplies used to demonstrate an assured water supply may include surface water, effluent, imported groundwater, credits from extinguishment of groundwater rights, a quantity of allowable groundwater use specified by the rules, or water stored pursuant to an underground storage permit.

1.3.2.5 Revisions to the Groundwater Code

Since 1980, the Code has undergone numerous changes to address emerging water management issues. Sections have been added to limit use of water in artificial lakes, address underground storage and recovery of water, limit transfer of groundwater between groundwater basins statewide, establish groundwater replenishment districts, establish the conservation assistance program, and to provide an alternative municipal conservation program. In addition, numerous changes have been made to expand or clarify previous language.

Throughout this process, the fundamental concepts of allocating the right to use groundwater and planning for the efficient and economic use of the water have been preserved. The Code, as comprehensive as it is, does not contain detailed instructions on how to manage water resources. Instead it provides a framework from which water management decisions are made in the AMAs. It is up to the Department and water users, through the development and implementation of the management plans, to establish the management strategies that lead to achieving the AMA management goals.

1.4 GOVERNMENTAL AND INSTITUTIONAL SETTING

In addition to the Department, there are a number of entities that carry out water management activities within the Pinal AMA. These entities include local, regional, state, tribal, and federal agencies, as well as private utilities and organizations. While the Department endeavors to coordinate its water management efforts with all of these entities, several have significant roles relating to water resources and conservation.

The Central Arizona Water Conservation District (CAWCD), also known as the Central Arizona Project, is a multi-county governmental agency that was formed to reimburse federal CAP canal construction costs, operate the CAP canal, and deliver CAP supplies to water users in the Phoenix, Pinal, and Tucson AMAs. CAWCD is overseen by an elected board of 15 members who represent the three-county service area of the district. The Central Arizona Groundwater Replenishment District (CAGRD) is a tax-exempt public improvement district authorized by state legislation to acquire water supplies to replenish aquifers depleted by district members. The CAGRD is an organizational unit of the CAWCD and is overseen by the CAWCD board.

The Arizona Water Banking Authority (AWBA) was created in 1996, primarily to ensure that Arizona's municipal and industrial allocations of Colorado River water will be protected in times of shortage. AWBA uses several funding sources to buy excess CAP water and recharge it for the future benefit of users both inside and outside of the CAP service area. AWBA is authorized to store water to support the management objectives of the AMAs and to engage in interstate water banking under specified conditions. AWBA has a five-member appointed board, which is chaired by the director of the Department. AWBA staff are housed in the Department's main office in Phoenix.

The Arizona Water Protection Fund (AWPF) was established in 1994 to provide grant monies for implementation of projects to protect or restore the state's riparian areas. The fund may be used to purchase CAP water or effluent for riparian enhancement. The AWPF Commission oversees the grants

process. The director of the Department serves as an ex-officio member on the commission, and the staff are located within the Department's main office.

At the state level, the Arizona Department of Environmental Quality (ADEQ) develops and enforces water quality regulations. Through recent legislation amending provisions of the Water Quality Assurance Revolving Fund (WQARF), the Department and ADEQ jointly participate in specified activities related to protection of groundwater quality and remediation.

The Arizona Corporation Commission (ACC) regulates the activities of private water companies, particularly rate-setting. The Arizona Department of Real Estate works with the Department to assure availability of water for new subdivisions.

Federal water management activities in the Pinal AMA include the Bureau of Reclamation's regulatory role in enforcing acreage limitations and water conservation practices within irrigation districts. The bureau also participates in negotiations to provide water resources to Indian communities on behalf of the Secretary of the Interior. Federal water management activities also include technical assistance provided by the Natural Resources Conservation Service (formerly the Soil Conservation Service) for improving on-farm irrigation systems. In addition, the United States Geological Survey works independently and in conjunction with the Department in the collection and analysis of hydrologic and subsidence-related data and flood warning information.

1.5 DEVELOPMENT OF THE THIRD MANAGEMENT PLAN

Preparation of the Third Management Plan has been guided by a set of overriding principles and specific objectives. These principles and objectives, and the specific contents of the report chapters, are described below.

1.5.1 Guiding Principles in Operations and Program Development

The Groundwater Code provides the Department with many management tools that vary in their flexibility and approach. The Code is both comprehensive and complex. In order to guide the operations of the Department and the preparation of the Third Management Plan, general management principles are needed. The Department will strive to develop programs during the third management period using a water management philosophy based on the following principles.

- **The authorities granted to the Department must be integrated into a comprehensive strategy for meeting the management goal of the AMA.** Numerous techniques are provided by the statutory structure to assist in meeting water management objectives. These techniques include: (1) water rights components of the Code, (2) assured water supply provisions, (3) underground storage and recovery provisions, (4) permitting requirements and conditions, (5) authority to develop well-spacing rules, (6) AWBA and AWPF programs, (7) augmentation and conservation assistance programs, and (8) water use reporting and enforcement authorities. All of these techniques must be integrated toward meeting the goal.

- **Effective water management must include both supply augmentation and demand management programs.** Supply augmentation includes substitution of renewable water supplies for non-renewable groundwater resources, storage of excess renewable supplies for future use, and meeting new demands with renewable supplies. The major focus of demand management is water conservation, which extends the availability of existing water supplies to serve more uses over a longer time frame.

- **All water sources need to be included in any long-term, comprehensive water management strategy.** Because reductions of groundwater use are dependent on the efficient utilization of non-groundwater sources of water, their inclusion in a multi-source water management program is essential.

- **Water users must have an integral role in management program development and implementation.** Water users with expertise in their own water use sector must play a major role in development and implementation of water management programs in order to ensure the success of these programs.

- **Water management efforts must consider economic impacts and feasibility.** Attaining water management goals requires the expenditure of public and private funds, which must be used as effectively and efficiently as possible. Therefore, water management strategies must be developed using sound economic principles.

- **Educating the public on water issues and involving the public in developing management programs are essential to building and sustaining an effective water management effort.** It is ultimately the members of the public who are asked to commit to implementing water management strategies. It is essential to provide them with the information they need to stay informed and with the opportunity to participate in developing water management programs.

- **Water management efforts should be consistent with, and enhance, the quality of life in the community.** Social values and environmental quality considerations are integral to the development of water management approaches. Adverse impacts on the quality of life and the potential for economic development in Arizona must be avoided.

- **The Department's water management efforts must recognize that individual customers, water users, water providers, municipal governments, and the real estate industry are important decision makers.** The role of the Department's programs and regulatory tools is to create a decision making environment that results in good water management decisions and investments.

- **Water supplies available today must be used to meet the needs of the future.** Excess CAP water available during the third management period must be managed to meet growing AMA demands and provide adequate supplies during future water shortages. Recharge of excess CAP water by AWBA and by AMA water users is an important component of successful water management.

- **Water management programs should provide a stable institutional framework that creates an environment of certainty for holders of groundwater rights.** Right holders must commit to, and implement, long-range plans in a world of evolving regulations. The provision of a predictable framework within which these regulations will evolve reduces the uncertainty for right holders. Additionally, management programs must be clearly stated and free of ambiguity.

- **Local water management issues must be addressed as regional and statewide strategies are developed.** There must be recognition of the impacts that regional or statewide water management programs can have on local water users.

- **Water management programs should be based on the premise that future issues are unlikely to be the same as those that have been encountered in the past, and that the pace of change is likely to increase.** In order to provide maximum flexibility for the future, data bases must be

enhanced and water management strategies developed to identify trends early and to test scenarios that vary from current conditions.

1.5.2 Third Management Plan Objectives

The following objectives must be achieved during the third management period to develop the management techniques needed to reach and maintain the management goal.

- The Department will establish and implement water conservation requirements for the Third Management Plan equitably among all water users. Public acceptance and economic, technical, health, and environmental constraints will be considered when establishing these requirements. Flexibility will be provided to address water users who, while implementing effective conservation measures, may not be able to comply with specific conservation regulations. Unique circumstances may be addressed through alternative conservation requirements designed to result in equivalent conservation or through variance or administrative review procedures provided for by statute.

- The Department will maintain conservation requirements initiated by the Second Management Plan that were effective and expand them where appropriate. The Department will recognize existing conservation efforts in establishing conservation requirements for the Third Management Plan.

- The Department will provide financial and technical assistance to implement water conservation, supply augmentation, and groundwater monitoring projects. AMA augmentation and conservation assistance funds will be used to implement cost-effective projects that are widely beneficial to the AMA.

- The Department will assist water users in identifying and implementing conservation, augmentation, and groundwater monitoring activities.

- The Department will expand public assistance and public education efforts to reach a larger portion of the public.

- The Department will provide incentives, as appropriate, to encourage conservation and augmentation activities that are consistent with water management objectives.

- The Department will actively participate in regional and local water management planning.

- The Department will collect, analyze, and maintain data in order to provide the information necessary to identify water management issues and to propose appropriate and timely solutions.

- The Department will endeavor to enhance water quality management efforts in order to preserve the quality and quantity of water available for existing and future needs.

- The Department will encourage recharge activities in areas where storage of renewable water supplies will be beneficial from a water management perspective. Management of both storage and recovery activities will be required to protect future water supplies and the storage capacity of the aquifers.

- The Department will encourage coordination between the many local, regional, state, tribal, and federal agencies that affect water policy, particularly the ACC, ADEQ, AWBA, CAWCD, and the CAGRD.

- The Department will work with the state's political leadership, water users, and the public to identify and develop the techniques and additional statutory authorities necessary to achieve water management goals and objectives.

1.5.3 Third Management Plan Content

The Third Management Plan addresses water conservation, groundwater quality, supply augmentation, and related water management programs for the years 2000 to 2010 and comprises the following five primary elements:

- Assessment of the status of water supplies and demands in the AMA
- Mandatory conservation requirements for agricultural, municipal, and industrial groundwater users and groundwater distribution systems
- Groundwater quality assessment and management program
- Augmentation and recharge program
- Water management assistance program

Statutory guidelines provided in A.R.S. §§ 45-566 and 566.02 direct that the following components be included in the Third Management Plan:

- New irrigation water duties for each farm unit
- An alternative agricultural program for Irrigation Grandfathered Right holders
- Additional reasonable reductions in per capita use to those specified in the Second Management Plan for municipal providers
- A Non-Per Capita Conservation Program for municipal providers
- Appropriate conservation measures for individual users on municipal systems
- Conservation or rate-of-use requirements for deliveries of untreated water
- Reasonable conservation requirements for small municipal providers
- Additional economically reasonable requirements for groundwater distribution by cities, towns, private water companies, and irrigation districts
- Conservation requirements for industrial uses based on latest commercially available conservation technology consistent with reasonable economic return
- A program for additional augmentation of water supplies by AMAs, including incentives for artificial groundwater recharge
- Cooperation with ADEQ in developing a groundwater quality assessment for the AMAs, including suggestions for groundwater protection
- A program for conservation assistance to water users within the AMA
- At the discretion of the director, a program subsequent to January 1, 2006 for the purchase and retirement of grandfathered rights
- A determination of historic annual net recharge for AMAs in which a groundwater replenishment district is located
- Recommendations to AWBA regarding storage capacities within the AMA, priority storage locations, and extinguishment of long-term storage credits

In addition, the Department is asked to describe in the Third Management Plan the approach by which the groundwater management issues emerging in the AMA will be addressed and how the provisions in the Code will assist in resolving these issues.

The Third Management Plan contains substantial information on water use characteristics, water supply and demand projections, groundwater quality, local water management issues, needs for water supply augmentation, and the Department's management approach to these issues. This information is provided to explain the management plan's development, educate interested individuals regarding the water

management issues facing the AMA, and provide information useful in developing future water management policies for the AMA. Throughout the plan, there are significant policy statements regarding how the Department proposes to manage the AMA's water supplies pursuant to the provisions of the Code and those of the plan. The regulatory requirements for groundwater users and water distribution systems are printed in italics for easy reference and located at the ends of chapters 4 and 5, after each industrial use sector in Chapter 6, and in Chapter 8.

1.5.4 Third Management Plan Development Process

1.5.4.1 Program Development and Implementation

The Third Management Plan is the result of a three-staged work effort that began in 1994. The first stage involved data collection and analysis culminating in development of a "State of the AMA" (SOAMA) report, which was widely distributed. In the second stage, issues identified in the SOAMA report and raised by the community were addressed in issue papers describing background information and identifying recommended alternatives to address the issues. The third stage involved developing recommended alternatives into program concepts and, ultimately, into the program chapters and legal requirements presented in the Third Management Plan. Throughout preparation of the Third Management Plan, public input and technical research have been used to identify issues, objectives, and solutions.

1.5.4.2 Public Participation

Multiple levels of public input have been utilized in the development of the Third Management Plan. The Code established for each AMA a GUAC, consisting of five members who are appointed by the governor and serve six-year terms. AMA staff has met regularly with the GUAC to obtain member's opinions and recommendations on all components of the management plan. These meetings are open to the public, and interested groups and individuals have communicated their views and recommendations in this forum. Pursuant to A.R.S. § 45-421(1), the GUAC must comment on the proposed plan before it is promulgated by the director.

The Department also consulted with numerous technical advisory groups and committees comprised of technical experts, water providers, industry representatives, agricultural representatives, scientists, and other organizations and individuals concerned with water management issues. Depending on the AMA, technical advisory committees were established to review material in the following areas: municipal, agriculture, turf, metal mining, sand and gravel, cooling towers and electric power, and dairy and feedlots. Technical review was also provided on materials addressing augmentation, groundwater quality, water resources, and water budgets. Public comments were received in meetings with interested parties and during and following presentations to civic organizations and the general public.

Additional public input is obtained through public hearings conducted pursuant to A.R.S. § 45-570. In these hearings, the Department presents information in support of the management plan and obtains comment regarding the plan. Before the plan can be adopted, the director must prepare a written response to the written and oral comments submitted as part of the hearings process.

1.6 CONCLUSION

The Third Management Plan is designed to outline the Pinal AMA's water management needs and present the Department's blueprint for working with water users to achieve the AMA's water management goals and objectives. Continued commitment will be needed from the Department and the public to reduce dependence on groundwater and achieve water conservation goals. With the support of the community, the Department can respond to changing water issues and needs while maintaining technical assistance and regulatory programs that ensure a dependable water supply for the AMA's future.